

PATENT ABSTRACTS OF JAPAN

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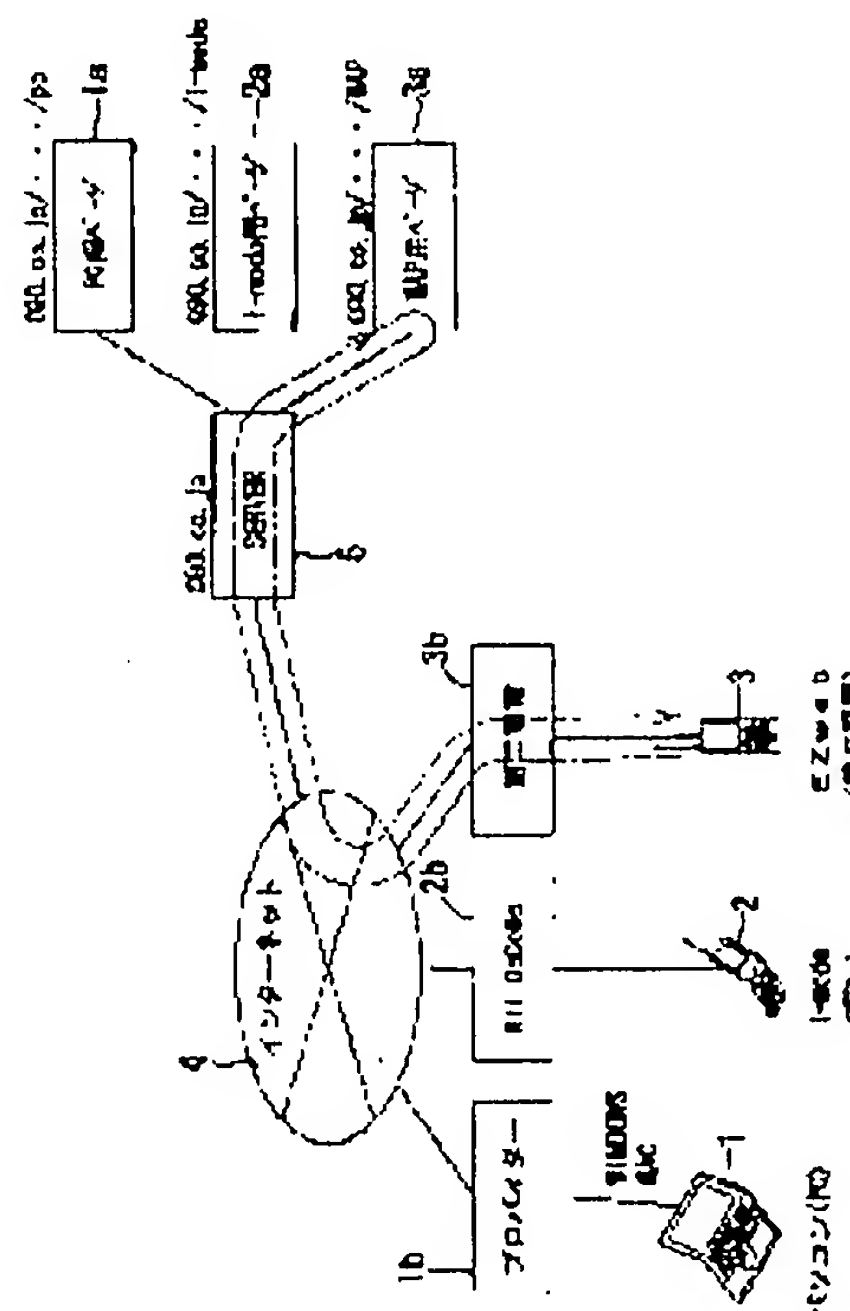
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(54) METHOD AND SYSTEM FOR PROVIDING ADAPTED CONTENTS

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a method and a system capable of automatically displaying contents adaptable to a user terminal in the case of accessing a Web site by using a user terminal such as a portable telephone, a personal computer, etc., in which a terminal operation environment such as a connecting company, a hardware configuration and a software configuration is different.

SOLUTION: A connection guide server 5 having a function for examining the terminal operation environment of the user terminal 3, specifying a Web page 3a adapting to the terminal operation environment and allocating the connection destination of the terminal 3 to the URL of the Web page 3a is provided between the terminal 3 and a contents server to be the final connection destination.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the approach and system which can offer the contents suitable for the user terminal to the various user terminals connected to the Internet.

[0002]

[Description of the Prior Art] There is a remarkable thing in osmosis into the society of the Internet, equipment connectable with the Internet is also increasing in number by leaps and bounds, and it is in the limelight in current as a user terminal which a cellular phone can connect to the Internet in addition to a personal computer or a personal digital assistant. By the way, since the hardware configuration differs from loading software etc. mutually, these equipments must offer the contents which suit each equipment, when offering contents to these different-species equipment. For this reason, to each site, offering the contents which suited each user terminal because I install the server for the contents supply for each [these] equipments and have this server access from a user side is performed.

[0003] Although there are various things in the difference in the user terminal seen from the contents offer side, the thing about a display, the thing about the difference in the language used, etc. are typical. For example, with a personal computer and a cellular phone, since the screen product and resolution of a display completely differ from each other, the display of the Web page in these both will be a completely different thing.

[0004] Moreover, it is [some which were described by WML (Wireless Markup Language) called WAP (Wireless Application Protocol) or HDML (Handheld Device Markup Language)] and is not uniform, if there are some which were described by CHTML (compactHTML) even if it is the same Web page for cellular phones. For this reason, at the contents offer side, it corresponds by preparing two or more kinds of contents which suited each for that from which operation environments, such as a hardware environment and a software environment, differ.

[0005]

[Problem(s) to be Solved by the Invention] However, in order for a user terminal to display these contents, the full path of URL (address) of a Web page with contents must be specified, and it is very troublesome. Moreover, URL of the Web page corresponding to each operation environment did not have to restrict always being announced officially, but had to look for that page by itself in this case, and has forced the big burden upon the user. Moreover, a user accesses the Web page which is not corresponded to a self user terminal in many cases, and is having forced unpleasant experience, such as a Web page not being displayed or becoming an imperfect display.

[0006] the adaptation contents offer approach that the contents as which the Web page corresponding to a terminal environment is chosen automatically and which it suits even if this invention is made in view of this present condition, and two or more kinds of user terminals from which a terminal environment differs are alike, respectively, it receives and a user does not specify the full path of the URL are displayed, and its system -- it is going to provide -- it is a thing.

[0007]

[Means for Solving the Problem] As a result of inquiring that this technical problem should be solved, when a user terminal connected this invention person to a provider or a contents offer server, the connection other party was provided with the information about a user's terminal environment, or it noted that there was a function to teach terminal environmental information to the inquiry from the other party in early stages of communication link initiation. And when using this function, automatic distinction of the terminal environment was carried out, the idea that a user terminal is connectable with the suiting Web page was obtained, and this invention was completed. This invention completed based on this idea has the next configuration.

[0008] Two or more sorts of user terminals from which, as for the adaptation contents offer system of this invention, an operation environment differs, With the contents server of plurality [**** / which manages two or more sorts of Web pages from which URL established on the Internet that two or more sorts of each user terminals from which these operation environment differs should be provided with the contents which carry out normal actuation differs / single] It intervenes in the middle of the communication path of said user terminal and contents server. Hold the information about terminal operation conditions required to carry out normal actuation of the contents offered from the Web page established by said each URL, and the operation environmental information is acquired from a user terminal in early stages of the time of communication link connection, or communication link initiation. It is characterized by having the connection guidance server which distributes the connection place of a user terminal to URL by which the Web page which suited the operation environment was established. If the contents (for example, the database itself which is a display parent) from which substantial contents differ may differ, the semantics of "displaying the contents which suited" here is included also when only display gestalten differ using the thing same as a database which is the same contents, for example, a display parent, substantially. While the Web page which can be distributed as a connection place of a user terminal uses a common database in the case of the latter, the function as a window which displays this database by different display format will be achieved.

[0009] The operation environment to fit may be a hardware environment of a user terminal, and may be a software environment. The typical things of a software environment are the language used, the class of browser, etc.

[0010] As operation environmental information acquired from a user terminal, the information which analyzes the User-Agent header which a user terminal transmits, for example, and is acquired, the browser information which a user terminal returns to the inquiry from a server, the provider information further included in the hysteresis information on the connection root are mentioned.

[0011] Although the new terminal which will appear in the future is also applicable as a user terminal, at present, a cellular phone, a personal computer, a Personal Digital Assistant, etc. are applicable.

[0012] Although especially the service that a contents server offers is not limited, if an interested category is specified for example, and member registration is carried out, it can illustrate the mail magazine to which the information updated when information was updated about the category is notified by e-mail. The location between which a connection guidance server is made to intervene does not ask whether it is in the Internet communication network, or it is outside that what is necessary is just to be in the middle of the communication path of a user terminal and a contents server. For example, making direct connection of a user terminal and the connection guidance server through the Internet is also considered. In this case, it will connect with a connection guidance server by calling the predetermined telephone number. Moreover, local connection of the connection guidance server may be made at a user terminal. The connection guidance server in this case is the handling like an adapter, and will be connected to a contents server via the means of a LAN course and also others through a public communication channel through the connection guidance server of this configuration like an adapter. The gestalt connected to a contents server completely through the Internet is also the application range of this invention. Application to the new communication network which replaces this application with the Internet which may appear in the future is expected.

[0013]

[Embodiment of the Invention] Next, it explains based on the example illustrating the detail of this

invention. Drawing 1 shows the typical example of this invention, and shows the case where adaptation contents are offered to two or more cellular phones with which a personal computer differs from the connection telephone company. Although the telephone corresponding to i-mode (NTT DoCoMo, Inc. trademark) of NTTDoCoMo (NTT DoCoMo, Inc. trademark) and the telephone corresponding to EZweb (DDI, Inc. trademark) of being cellular (DDI, Inc. trademark) are illustrated as a cellular phone here, it cannot be overemphasized that the candidate for application of this invention is not limited to these.

[0014] In the case of this example, in a personal computer 1, it connects with Web page (page for PC is called hereafter) 1a for personal computers, and it must connect with page 2a for i-mode, and the cellular phone 2 corresponding to i-mode must connect the cellular phone 3 corresponding to EZweb to page 3a for WAP. In order to make such connection automatically, without needing the special actuation by the side of a user terminal, the connection guidance server 5 for distributing the destination which goes to a Web page from a user terminal in the middle of the communication path of said each user terminals 1, 2, and 3 connected to the Internet 4 and the contents server which offers each Web pages 1a, 2a, and 3a is formed. Each Web pages 1a, 2a, and 3a may be offered by the contents server which became independent, respectively, and may be offered by the common contents server. As a result of forming the connection guidance server 5, a user Each Web page 1a, It will go via a connection guidance server as the access root to 2a and 3a. The Web page which suited each user terminal only by all the user terminals 1, 2, and 3 specifying a connection guidance server's URL (for example, 090.co.jp) as the connection place (-- for example, -- if it is a page for PC and is 090.co.jp/.../pc and a page for i-mode -- 090.co.jp/. if it is a page for /i-mode and WAP -- 090.co.jp/. it can distribute to /WAP). The database which is common contents supply origin is behind each [these] page which was able to be distributed, and the contents of this database are displayed by the display format which suited each user terminal through said each Web page. Although offer of the contents which suited each user terminal is enabled by displaying the contents of the common database through said each Web page here, not using a common database, the database of dedication may be formed for every user terminal. It can respond to various user terminals, without adding a hand to the database which is contents supply origin by preparing the Web page as a window which takes charge of a display according to the class of each user terminal, in using a common database.

[0015] In order to enable the distribution to such each Web page, the database which specified the correspondence relation between the function to analyze the terminal environmental information received from user terminals 1, 2, and 3 at the time of connection with user terminals 1, 2, and 3, and URL of the Web page which suits each terminal environmental condition and it is given to the connection guidance server 5. Although the connection guidance server 5 distributes URL of the connection place of user terminals 1, 2, and 3 based on this database, there is the following in the technique by which the connection guidance server 5 acquires terminal environmental information from user terminals 1, 2, and 3.

[1] The technique of analyzing the User-Agent header information which a client transmits. According to this approach, the information about software environments, such as hardware environments, such as model information on a terminal, and a class of browser, can be acquired.

[2] The technique of asking user terminals 1 and 2 from the connection guidance server 5 side after connection establishment, asking 3 sides a terminal environment, and obtaining the reply. According to this technique, the information about the hardware environment of a terminal or the class of browser can be acquired.

[3] The technique of acquiring the root hysteresis of the server which passed by the time it resulted [from user terminals 1, 2, and 3] in the connection guidance server 5 at the time of communication link connection. According to this technique, since the server which went first can specify, the information about the connection telephone company can be acquired.

[4] The technique of acquiring the domain name to which a user terminal belongs using a domain name server from the self-IP address of the user terminals 1, 2, and 3 obtained at the time of communication link connection. According to this technique, the connection telephone company and a provider can

specify by the domain name.

[0016] If needed, it uses independently, or each [these] technique is combined and used. By each [these] technique, since the information about operation environments, such as distinction of whether a user terminal is a personal computer, a cellular phone, or a Personal Digital Assistant, distinction of the connection telephone company of a cellular phone, a model name of a cellular phone, OS of a personal computer and the class of loading browser, and distinction of a provider, can be acquired, the connection place of a user terminal can be distributed based on this information. Distribution is performed by flying the Location header for displaying this Web page to URL of the Web page which suits a user terminal in delivery and the connection place of a user terminal, after the connection guidance server which acquired the operation environmental information of a user terminal specifies the suiting Web page. Hereafter, an example is explained based on a drawing.

[0017] By drawing 1, it is identified by the connection guidance server that the connection telephone company of the cellular phone 3 which accessed the connection guidance server 5 is each cellular company (DDI), and signs that the connection place has distributed to the page for WAP are shown.

[0018] By drawing 2, it is identified by the connection guidance server that the connection telephone company of the cellular phone 2 which accessed the connection guidance server 5 is NTT DoCoMo, and signs that the connection place has distributed to the page for i-mode are shown. By